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Publication number:

**0 117 940
A3**

12

EUROPEAN PATENT APPLICATION

21 Application number: 83305292.1

51 Int. Cl.³: **A 61 F 1/00**

22 Date of filing: 09.09.83

30 Priority: 06.12.82 US 447420

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43 Date of publication of application: 12.09.84
Bulletin 84/37

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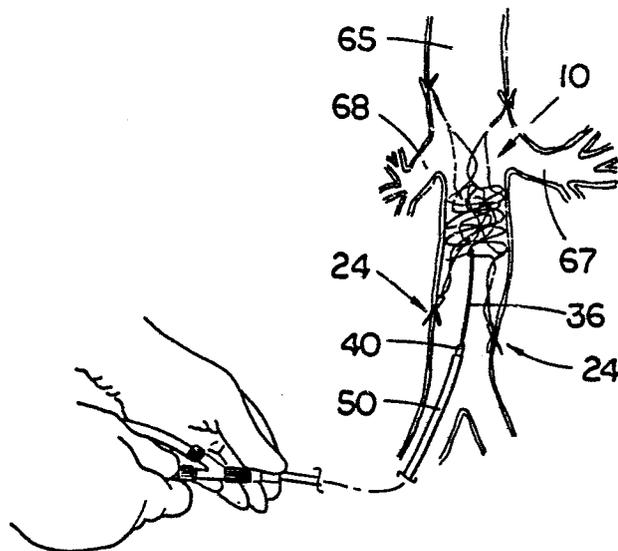
84 Designated Contracting States: **AT BE CH DE FR GB IT
LI LU NL SE**

88 Date of deferred publication of search
report: 07.11.84 Bulletin 84/45

74 Representative: **Bannerman, David Gardner et al,
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54 **Expandable blood clot filter.**

57 A blood clot filter which is particularly suited for filtering emboli from blood circulating through the inferior vena cava. The filter is comprised of a number of strands of shape memory wire which are interconnected and wadded together to form a curly wire mesh (10). The wire strands may be substantially straightened in order to permit insertion of the filter within the lumen of an angiography catheter (40). The filter includes a number of projections (24) which serve as an anchoring means for anchoring the filter at a suitable body location within the inferior vena cava (65). One of the strands of wire includes a zig-zag which permits the attachment of the filter to the stretched distal end of a helically formed wire guide (36), thereby permitting the filter to be urged longitudinally through the lumen of the catheter (40) for positioning within the inferior vena cava. In order to implant the filter, a percutaneous catheterization is made using a femoral approach. Once inside the inferior vena cava, the filter is pushed out of the catheter using the wire guide. The filter automatically expands to fill the passageway of the inferior vena cava without causing substantial occlusion thereof.



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DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl. *)
D,A	<p><u>US - A - 3 952 747</u> (G. KIMMEL)</p> <p>* Figures 1-3; column 5, line 7 - column 6, line 13 *</p> <p>--</p>	1	A 61 F 1/24
D,A	<p><u>US - A - 3 540 431</u> (K. MOBIN-UDDIN)</p> <p>* The whole document *</p> <p>--</p>	1,2	
D,A	<p><u>US - A - 3 334 629</u> (B. COHN)</p> <p>* Figures 1-5; column 2, line 5 - column 3, line 55 *</p> <p>--</p>	1	
A	<p>MEDICAL AND BIOLOGICAL ENGINEERING, vol. 14, no. 6, November 1976, pages 629-635. J. DRILLER et al.: "New percutaneous caval filter device for pulmonary thromboembolism".</p> <p>--</p>	1	<p>TECHNICAL FIELDS SEARCHED (Int. Cl. *)</p> <p>A 61 F</p>
A	<p><u>DE - A - 3 203 410</u> (J. HEINKE et al.)</p> <p>* Figures; claim 1 *</p> <p>----</p>	1	
<p>The present search report has been drawn up for all claims-</p>			
Place of search The Hague		Date of completion of the search 29-03-1984	Examiner LEVENBACH
<p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons</p> <p>& : member of the same patent family, corresponding document</p>			





CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing more than ten claims.

- All claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for all claims.
- Only part of the claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims and for those claims for which claims fees have been paid, namely claims:
- No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims.

LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirement of unity of invention and relates to several inventions or groups of inventions, namely:

1. Claims 1-12.
2. Claims 13-16.

- All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.
- Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:
- None of the further search fees has been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims: 1-12